IN THE

Supreme Court of the United States

No. 31, Original

OCTOBER TERM, 1967

STATE OF UTAH, PLAINTIFF

v.

UNITED STATES OF AMERICA, DEFENDANT

REPORT OF SPECIAL MASTER

CHARLES FAHY,
Senior Circuit Judge,
Special Master.

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REPORT OF SPECIAL MASTER

To the Chief Justice and Associate Justices of the Supreme Court of the United States:

I. INTRODUCTION

This Report of the Special Master is concerned with another stage of the controversy between the State of Utah and the United States over the ownership of certain land, and its content, within the surveyed meander line[1] of the Great Salt Lake.

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[1] The meander line of the Great Salt Lake is the line duly surveyed prior to and in accordance with section 1 of the Act of June 3, 1966, 80 Stat. 192, which provides:

> That the Secretary of the Interior shall within six months of the date of the passage of this Act complete the public land survey around the Great Salt Lake in the State of

Pursuant to the terms of the Act of Congress of June 3, 1966, 80 Stat. 192, as amended, 80 Stat. 349, the Secretary of the Interior on June 15, 1967, by quitclaim deed conveyed to Utah all interests of the United States in these lands, including brines and minerals in solution in the brines, or precipitated or extracted therefrom,[2] conditioned upon payment by Utah to the United States of the market value of the interests covered by the deed should it be determined that they actually belonged to the United States. To have that question judicially determined Utah adopted one of the alternative courses authorized by the Act by filing this original suit in the Supreme Court seeking a decree to quiet its title as against the United States to the lands and content in dispute. See section 5(b) of the Act.

Several phases of the over-all controversy have been decided by the Court. In *Utah* v. *United States*, 394 U.S. 89 (1969), the Court denied intervention of a private claimant, Morton International, Inc., approving the recommendation of the late Senior Circuit Judge J. Cullen Ganey, Special Master. In *Utah* v. *United States*, 403 U.S. 9 (1971), again on the basis of the Report of Judge Ganey, the Court held that the Lake was navigable when the State of Utah was admitted to the Union on January 4, 1896, and that, as a consequence, under the equal-footing doctrine,[3] title to the bed of the Lake at state-

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Utah by closing the meander line of that Lake, following as accurately as possible the mean high water mark of the Great Salt Lake used in fixing the meander line on either side of the unsurveyed area.

[2] When "land", "lands", "bed of the Lake" appear in this Report to describe the interests involved the words are used to include the brines and minerals in solution in the brines or precipitated or extracted therefrom.

[3] *Pollard's Lessee* v. *Hagen*, 44 U.S. (3 How.) 212, 221-23, 228-30 (1845); *Bonelli Cattle Co.* v. *Arizona*, 414 U.S. 313

hood vested in Utah. Thereupon the Court, in *Utah* v. *United States*, 406 U.S. 484, entered its decree of May 22, 1972, in the form of an injunction against the United States, but in substance quieting in Utah, as against the United States, the title to the bed of the Lake lying below its water's edge on June 15, 1967, the date of the quitclaim deed, with exceptions not now material, and to the natural resources and living organisms therein or extracted therefrom. The Court also held that Utah is not required to pay the United States for the interests thus described in the decree.

The decree of May 22, 1972, by its paragraph 3, brings us to the present problem. It provides as follows:

> 3. The basic question yet to be determined in this case is whether prior to June 15, 1967, the claimed doctrine of reliction applies and, if so, whether the doctrine of reliction vests in the United States, and thus divests the State of Utah, of any right, title or interest to any or all of the exposed shorelands situated between the water's edge on June 15, 1967, and the meander line of the Great Salt Lake as duly surveyed prior to or in accordance with § 1 of the Act of June 3, 1966, 80 Stat. 192. A Special Master will be appointed by the Court to hold such hearings, take such evidence and conduct such proceedings as he deems appropriate and, in due course, to report his recommendations to the Court.

406 U.S., at 484-5. Judge Ganey in the meantime having died the Court appointed the present Special Master, with the authority thus noted. 406 U.S. 940 (1972).

(1973). Under this doctrine, in the absence of a congressional condition to the contrary, a State, upon its admission to the Union, acquires title to the bed of navigable waters within the State, as had the thirteen original colonies as successors to the rights of the British Crown.

Not at issue in this litigation are the claims of private persons, vendees and patentees, to about 275,000 acres adjacent to the Lake.

Lake of 8.28 inches "would inundate about 50,000 acres of shoreland" (R. 29), inasmuch as the inundation of about 50,000 acres would occur *only* when a change took place at the level of about 4198.5 feet above mean sea level (the average level of the Lake since statehood), whereas generally a lesser number of acres is inundated by changes of 8.28 inches at both lower or higher elevations as shown in Exhibit P–5 (reproduced as a part of the Report).

3. The United States excepts to the characterization in Finding of Fact 14 that the effect of mountains upon the movement of the water along the shoreland is "not reflected in the calculation described in Finding 13" (R. 30), inasmuch as the calculation is an average which inherently includes areas where the rate of movement is both greater and smaller than the stated average.

4. The United States excepts to the characterization in Finding of Fact 15 that the average movement along the shoreland of 1½ inches per hour is "to an unascertained degree an under-estimate of the rate of movement over extensive areas of shore" (R. 30). The movement over the flattest part of the shore during the most extreme year amounted to only 15 inches per hour (Br. for the United States Before the Special Master, p. 7, n. 7). This is the greatest possible extent to which the calculated average in Finding 13 is an "under-estimate."

5. The United States excepts to the determination in Finding of Fact 15 that the average movement of 1½ inches per hour, or the maximum historical movement of 15 inches per hour, is a rate of movement which is not imperceptible.

6. The United States excepts to the determination in Finding of Fact 18 that the progress "of a recession or inundation," unobscured by "constant fluctuations," cannot be found to "be imperceptible as it occurs" (R. 31).

7. The United States excepts to the determination in Finding of Fact 19 that the land exposed between statehood and the time of the quitclaim deed "was not an addition of a reasonably permanent or stable character" (R. 31).

III

With respect to the Proposed Decree of the Special Master appearing at pages 32–34 of his Report:

1. The United States excepts to the failure of the Special Master to include in the preamble of paragraph 1 the words "such as" in the phrase "subject to any regulations which the Congress may impose in the interest of navigation or pollution control" (R. 32–33), inasmuch as the Decree entered by this Court on May 22, 1972, 406 U.S. 484, uses the phrase "subject to any regulations which the Congress may impose, *such as* in the interest of navigation or pollution control [emphasis added]."

2. The United States excepts to the Proposed Decree of the Special Master in its entirety (R. 32–34), insofar as it grants the relief sought by Utah and denies the relief sought by the United States.

Respectfully submitted.

ROBERT H. BORK,
Solicitor General.

MAY 1974.

In the Supreme Court of the United States

OCTOBER TERM, 1973

No. 31, ORIGINAL

STATE OF UTAH, PLAINTIFF

v.

UNITED STATES OF AMERICA

BRIEF FOR THE UNITED STATES IN SUPPORT OF EXCEPTIONS TO THE REPORT OF THE SPECIAL MASTER FILED APRIL 15, 1974

I. INTRODUCTION

This litigation is authorized by the Great Salt Lake Lands Act, 80 Stat. 192. In order to assure a permanent boundary between state and federal ownership of land in the Great Salt Lake Basin, Congress provided that the surveyed meanderline of the Great Salt Lake should become the boundary between state and federal ownership. To that end, the United States would quitclaim to Utah all of its interests below the meanderline,[1] and Utah, in partial compensation, would quitclaim to the United States all of its interests above the meanderline. These mutual obligations exist without regard to whether land on either side of the meanderline was exposed or inundated by the water (80 Stat. 192, Secs. 2 & 4). Utah agreed to pay

[1] The meanderline was surveyed at several different dates, but in many places approximates the level of the Lake in 1855.

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an assessed valuation for whatever land this Court determines that the United States owned below the meanderline as of the date of the quitclaim deed, June 15, 1967. Should Utah fail to do so within two years of the valuation, the mutual conveyances are cancelled, and each party would own those lands to which it was entitled in the absence of the Act.

In an earlier stage of this litigation, this Court held that the Great Salt Lake was navigable at the time of Utah's admission to the Union, and that the State therefore acquired title to the bed of the Lake by operation of the equal footing principle. 403 U.S. 9. Thus, the State of Utah is not obliged to pay the United States for any of the lands lying below the level of the Lake on June 15, 1967. 406 U.S. 484.

The question to be determined at this stage of the litigation is whether the lands exposed by the recession of the waters of the Great Salt Lake between statehood (January 4, 1896) and the date of the quitclaim deed from the United States (June 15, 1967) belonged to the United States, where it is the upland owner, by operation of the doctrine of reliction. If so, Utah is obliged to pay the United States for the lands so conveyed on June 15, 1967.[2]

[2] Should this Court agree with the Special Master that the doctrine of reliction is not applicable to Great Salt Lake and that Utah therefore has continued, notwithstanding any recession of the waters of the Lake, to own all lands within the boundary of the Lake at the time of statehood, it will then become necessary to resolve the dispute among the parties concerning the boundary of the Lake at statehood. The State contends that the surveyed meanderline represents the correct boundary of the Lake, and that therefore the quitclaim deed executed by the United States on June 15, 1967, did not enhance the State's title; in that case, the State would owe no payment to the United States under the Act.

II. QUESTIONS PRESENTED

1. Whether the fact that rapid daily and seasonal changes occur along the shorelands of the Great Salt Lake and the fact that exposed shorelands may someday be reinundated render the doctrine of reliction inapplicable to the Great Salt Lake.

2. Whether, between statehood and the date of the quitclaim deed, portions of the bed of the Great Salt Lake were exposed by a gradual and imperceptible process.

III. STATEMENT

In this stage of the litigation, there is little factual dispute concerning the history and characteristics of the Great Salt Lake.[3]

The Great Salt Lake occupies the lowest part of a flat, closed basin. The Lake is approximately 70 miles long and 30 miles wide. Its maximum depth is about

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On the other hand, the United States contends that the boundary of the Lake on January 4, 1896, is defined by the water's edge at that date (or some seasonally adjusted line derived therefrom), so that it remained the owner of the substantial areas lying between the water's edge at statehood and the surveyed meanderline, much of the Lake having been surveyed (and the meanderline established) at times when the elevation of the Lake was substantially higher than at statehood.

If, on the other hand, the Court agrees with us that the doctrine of reliction applies, only the technical matter of determining the boundary of the Lake on the date of the quitclaim deed will remain, and issues relating to the meanderline will drop out of the case and will not require further litigation.

[3] See R. 27, n. 24. The principal witness at trial was a joint witness, Mr. Theodore Arnow, United States Geological Survey (U.S.G.S.), Utah. Mr. Arnow's testimony (Tr. 28–61) consisted mainly of a brief explanation of the history of the Lake and the cause of its fluctuations. The detailed history of the fluctuations is set forth in plaintiff's Exhibits, which are derived from U.S.G.S. records.

34 feet. At some points, the shorelands surrounding the Great Salt Lake are extremely flat, while at others, mountain ranges project through the Lake. As a result, a change in the level of the Lake may inundate or expose considerable shorelands in some areas and no shorelands at all in others (Tr. 33–34).

The Great Salt Lake has no outlet. The only way the Lake loses water (outflow) is by evaporation. It receives water (inflow) from tributaries and from rainfall on the Lake. Since outflow rarely exactly equals inflow, the level of the Great Salt Lake fluctuates (Tr. 36–38; Ex. P–4).

Many variable but interrelated physical factors affect the level of the Great Salt Lake. The rate of inflow is for the most part a function of precipitation (Tr. 40). The rate of evaporation is a function of the wind, temperature, salinity, and surface area of the Lake. In addition, inflow affects salinity and surface area: As the level of the Lake rises, the rate of evaporation increases because there is more surface from which to evaporate, and conversely. Heavy inflow decreases the salinity of the water, which also increases evaporation. Thus, the level of the Lake tends to be self-stabilizing (Tr. 48–54).

The level of the Great Salt Lake is affected by three general types of fluctuations: annual, seasonal, and daily. Only the annual fluctuations reflect a change in the ordinary high water mark—the boundary that is subject to modification by the doctrine of reliction.

Daily fluctuation is caused by the action of the wind and is not a change in the level of the Lake. The wind can push up as much as two feet of water in one

part of the Lake while the level goes down commensurately elsewhere (Tr. 46–47).

The seasonal fluctuation reoccurs each year in essentially the same pattern and is the dominant element in changes in lake elevation (Cf. Exs. P–4, P–9, P–11). It is caused principally by regular changes in temperature and precipitation. Over the hot, dry summer the level of the Lake declines. As the temperature cools, the seasonal low occurs, usually in October or November. Maximum precipitation occurs in late fall and early spring, and the level of the Lake rises. As the temperature increases in the late spring, snowmelt runoff occurs. The seasonal high usually occurs in May or June, depending upon the coolness of the spring, again followed by a decline over the hot, dry summer (Tr. 48–49). These cyclical seasonal fluctuations are not in themselves changes in the boundary of the Lake.[4]

The annual change is a product of every physical factor affecting the level of the Great Salt Lake. It is measured by differences in the "average yearly stage" of the Lake, which is the average of the levels of the Lake at regular intervals over a 12-month cycle (Ex. P–18, p. 4). This is comparable to the 18.6 year cycle used in computing tidal boundaries. See *Borax, Ltd.* v. *Los Angeles,* 296 U.S. 10, 26–27.

Annual changes in the level of the Great Salt Lake have generally been less than 1 foot per year. Since statehood, the average annual change has been about 8 inches (Ex. D–3). The greatest annual change occurred in 1907, when the level of the Lake rose 1.86 feet or less than 1/16 inch per day. Since that time

[4] See discussion at pp. 15–17, *infra.*

the Lake has experienced an annual change of more than a foot on only ten occasions (Ex. D–3; Ex. P–18).[5]

Even though the annual fluctuations have not been great, small changes in the level of the Lake can inundate or expose hundreds of feet of shoreland (Ex. D–4) because the shorelands in some parts of the Great Salt Lake are extremely flat (see Exs. D–1 and D–2). As the level of the Lake changes, the movement of the water's edge in these flat areas is almost in a horizontal direction.

The average annual movement of the boundary of the Great Salt Lake has been quite small. Since statehood, the average Lake level has been about 4198.5 feet [6] (Ex. P–18). At this level, the average annual change in water level of .69 feet (Ex. D–3) would expose or inundate about 50,000 acres of shorelands (Ex. P–5). However, in a lake with a shoreline of 350 miles (1973 World Almanac, p. 474) this means an average movement along the shore of less than 1,200 feet (1178.5).[7] Such a movement is barely 3 feet per day, or a little more than 1½ inches per hour.

Similar calculations can be made for extreme circumstances. For example, the flattest shorelands in the entire perimeter of the Lake are located in the northwest corner (Ex. D–1; see B–B′ in Ex. D–5). The greatest annual change occurred between 1906 and 1907 when the level of the Lake rose from 4196.83

[5] Ex. D–3 and Ex. P–18 contain data only through 1967, the year of the quitclaim deed.

[6] All levels given are distances above mean sea level.

[7] 50,000 acres = 78⅛ sq. mi. 78⅛ sq. mi. divided over a 350 mile shore is .2232 mi., which equals 1178.5 feet.

to 4198.69 feet above mean sea level (Ex. D–3). As shown by cross-section B–B′, about 2.2 miles of shoreland, or 11,616 feet, were inundated in that area in one year. This most extreme movement in the most extreme year represents a "horizontal" movement of about 31 feet per day or only 15 inches per hour (Ex. D–4). And even in the most extreme year, many other areas along the shore remained relatively unaffected. At the area shown by cross-section D–D′, only 0.2 miles, or 1,056 feet, were inundated over the same year. This represents less than 3 feet per day or 1½ inches per hour (Ex. D–4). Values for the most extreme movement in an average year (which the master found unascertained in Finding of Fact 14) and the average movement in the most extreme year can be similarly calculated. Both would lie between 1½ and 15 inches per hour.

Long-term trends in climate have resulted in general upward or downward trends in the level of the Lake (Tr. 53). The evidence shows that on the day of statehood the level of the Great Salt Lake was 4200.8 feet,* and was approaching the bottom of a long downward trend. The average yearly stage of the Lake bottomed in 1903 at 4197.00 feet, and in 1910 reached the top of an upward trend. For about the next 15 years, the level of the Lake remained stable, fluctuating above the statehood level at 4202–4203 feet. In 1924 a downward trend began, which bottomed in 1936 at 4194.77 feet. For the next ten

* The Master's finding that the level was 4200.2 feet is not supported by the evidence. See Exs. P–3, P–11.

years the level of the Lake again remained relatively stable at about 4194.5 to 4195.5 feet. In 1946 the level of the Lake began a rise which peaked in 1953 just below the statehood level, only to fall to the all-time low of 4192.22 feet in 1963. At the time of the trial the level of the Lake was rising and had almost reached statehood level (Ex. P–4; Ex. P–18; Ex. D–3; Ex. D–6). We are informed by the United States Geological Survey that the Lake is now above the statehood level. The May 24, 1974, level was 4201.4 feet.

Between statehood and the date of the quitclaim deed from the United States, the level of the Lake fell from 4200.8 feet (January 4, 1896) to 4194.9 feet (June 15, 1967). As a result, the water's edge moved inward and approximately 396,000 acres of shorelands were exposed around the Great Salt Lake (Ex. P–5).

ARGUMENT

The Special Master correctly concluded that federal rather than state law applies to determination of the boundary here in question (R. 5–7), relying on *Bonelli Cattle Co.* v. *Arizona,* 414 U.S. 313. His Report in general correctly states the federal law of accretion, which essentially guarantees to the upland owner title to adjoining riparian land that is formed by "gradual and imperceptible" processes (R. 10–14). See *Bonelli, supra,* 414 U.S. at 325–326, citing *Philadelphia Co.* v. *Stimson,* 223 U.S. 605, 624.

We submit, however, that in applying this standard, the Special Master made two errors of law. He regarded perceptible changes caused by seasonal factors

as affecting the boundary of the Lake and, because they were perceptible, as negating the applicability of reliction (R. 17–20). And, secondly, he held that even if the movement were gradual and imperceptible, reliction would not apply if the land uncovered was not "reasonably permanent or stable" in the sense that it was subject to reinundation, years or decades later (R. 20, 23–24). As we show below, however, the principle of reliction requires only that a change be gradual and imperceptible as measured without regard to ephemeral or seasonal factors. We further show that the record establishes that the changes in the boundary of the Great Salt Lake have been gradual and imperceptible. Finally, we show that analysis of the public benefit of the parties here provides no reason to change the established rule.

I. PERCEPTIBLE AND EXTENSIVE TEMPORARY OR SEASONAL MOVEMENTS OF A PHYSICAL RIPARIAN BOUNDARY DO NOT AFFECT THE LEGAL BOUNDARY AND THUS DO NOT DEFEAT THE APPLICABILITY OF THE DOCTRINE OF RELICTION

The Special Master takes special note in his report of data showing extensive seasonal changes in the area of the Lake (R. 17, par. 1) and minor but continuous daily fluctuations (R. 17–18). He uses this to indicate that when the "actual effect on the shorelands of such a change" is perceptible, at any time, then the doctrine of reliction cannot apply. This is not the law.

The boundary does not fluctuate with seasonal or obviously temporary changes. As the Court observed in *Alabama* v. *Georgia*, 23 How. 505, 515:

> * * * the bed * * * is that portion of its soil which is alternately covered and left bare, as there may be an increase or diminution in the supply of water, and which is adequate to contain it at its average and mean stage during the entire year, *without reference to the extraordinary freshets of the winter or spring, or the extreme droughts of the summer or autumn.* [Emphasis added.]

See also *Sapp* v. *Frazier,* 51 La. Ann. 1718, 26 So. 378, 380; *Hillebrand* v. *Knapp,* 65 S.D. 414, 274 N.W. 821, 823; *Anderson* v. *Ray,* 37 S.D. 17, 156 N.W. 591, 593.

Similarly, the movement of the water's edge during the annual flood stage of the Colorado River may well have been perceptible, but that movement did not affect the location of the ordinary high water mark. See *United States* v. *Claridge,* 416 F. 2d 933 (C.A. 9); *Arizona* v. *Bonelli Cattle Co.,* 107 Ariz. 465, 489 P. 2d 699, reversed on other grounds, 414 U.S. 313. And this Court has held that continual fluctuations do not prevent the application of the doctrine of reliction to more permanent changes, stating in *Philadelphia Co.* v. *Stimson, supra,* 223 U.S. at 625–626:

> * * * the general principle of accretion * * * applies * * * notwithstanding the extent and rapidity of the changes *constantly* effected. *Jefferis* v. *East Omaha Land Co.,* [314 U.S. 178]; *Jones* v. *Soulard,* 24 How. 41; *Saulet* v. *Shepherd,* 4 Wall. 502; *County of St. Clair* v. *Lovingston, supra; St. Louis* v. *Rutz,* [138 U.S. 226.] * * * *Nebraska* v. *Iowa,* [143 U.S. 359] * * *." [Emphasis added.]

Contrary to this rule, the Special Master here erroneously concluded that because of the constant fluctuations of the level of the Great Salt Lake, the doctrine of reliction does not apply. The same argument was rejected in *Nebraska* v. *Iowa,* 143 U.S. 359, involving another famous body of water, the Missouri River, wherein the Court stated (*id.* at 367, 369–370):

> * * * It is contended, however, that the doctrine of accretion has no application to the Missouri River, on account of the *rapid and great changes constantly going on* in respect to its banks; but the contrary has already been decided by this court in *Jefferis* v. *Land Company,* 134 U.S. 178, 189. [Emphasis added.]
>
> * * * * *
>
> Our conclusions are that, notwithstanding the rapidity of the changes * * * the law of accretion controls * * *.

See also Beck, *The Wandering Missouri River: A Study in Accretion Law,* 43 N. Dak. L. Rev. 429 (1967).

II. LANDS THAT ARE SUBJECT TO REINUNDATION MAY NONETHELESS BE GAINED BY RELICTION

The Master's Report concludes that there must be a reasonable permanence or stability to the change in a physical riparian boundary in order for the doctrine of reliction to work a change in the legal boundary as well. As just noted, to the extent that this rule refers to seasonal or temporary changes, it is correct. Here, however, the Master has applied it to a situation where

an area may change from exposure to inundation only at intervals of many years or decades. For example, the land being reinundated by the present rise in the Lake has been dry for the last 22 to 43 years (see Ex. P–4). Similarly, many cases have held reliction applicable where a river first moved in one direction and then reversed its course to re-expose the land it had inundated. See, *e.g.*, *Peuker* v. *Canter*, 62 Kan. 363, 63 P. 617 (river moved and returned in 21 years); *Rupp* v. *Kirk*, 231 Iowa 1387, 4 N.W. 2d 264 (river moved in one direction for 25 years with occasional backtracking, then reversed); *Widdecombe* v. *Chiles*, 173 Mo. 195, 73 S.W. 444; *Wilcox* v. *Pinney*, 250 Iowa 1378, 1381, 98 N.W. 2d 720, 723. See also Beck, *supra*, p. 17, 43 N. Dak. L. Rev. at 453–461.[9] And, of course, land which is exposed or inundated just before a change in direction of movement takes place is generally the land that will be reinundated or re-exposed the most quickly. Thus land at the 4195 foot level exposed in 1960 was again inundated in 1966 (Ex. P–4).

In the present case, however, the long-run changes were of a reasonably permanent nature, and correlate well with long run factors such as rainfall.[10] For example, the Lake has reached the statehood level only once since that time, in 1909–1929. Conversely, at no

[9] Indeed, if a boundary did not remain ambulatory despite repeated water movement across a given point, the established doctrine that land lost by erosion or reliction may be regained by accretion or dereliction would be largely negated. See Lundquest, *Artificial Additions to Riparian Land: Extending the Doctrine of Accretion*, 14 Ariz. L. Rev. 315, 325–326 (1972); 5A Thompson *on Real Property* (1957 Replacement) § 2652, p. 614.

[10] See Peck and Richardson, *Hydrology and Climatology of the Great Salt Lake*, in Guidebook to the Geology of Utah, No. 20, Figure 4.

other period has it fallen as low as it did in 1960–1967. In the context of the average yearly fluctuation in the lake level of well under 1 foot, the long run changes of as much as 15 feet clearly indicate the applicability of the doctrine of reliction, rather than the exception for temporary or seasonal changes discussed in point I, *supra*.

Furthermore, the cases cited by the Special Master are inapposite. *Sapp* v. *Frazier,* 51 La. Ann. 1718, 26 So. 378 (1899), is only an elaboration of the rule that a boundary does not follow seasonal changes. As the Lousiana court explained:

> But the mere temporary subsidence of the waters, occasioned by the seasons, coming in the winter and staying through the spring, going in the summer and gone through the autumn, does not constitute dereliction, in the sense of an addition to the contiguous lands, susceptible of private ownership as riparian rights. There is no "increase of the land" in such case. The reliction must be from the waters in their usual state. Where it periodically rises up over the land, and then recedes, there is no reliction. [26 So. 380.]

Thus, in the context of a seasonal change, the Louisiana court continued:

> There has been no permanent uncovering of the waters, no laying bare of the bottom by the retirement of the waters to stay, and no shrinking back of the waters below the usual water-mark, and the remaining of the same at the point of shrinkage. It is true its bed, or a large part of it, becomes measurably dry, and

> remains so, more or less, for four or five months in the year. But it becomes covered again with water, which remains over it six or seven months, and in turn runs off, leaving the bed exposed; and this successive recurrence of conditions has been going on without any change from time immemorial. [26 So. 381.]

Likewise, *State* v. *Longyear Holding Co.*, 224 Minn. 451, 29 N.W. 2d 657 (1947), does not support the Special Master's position. That case involved the temporary drainage of a lake to allow iron mining on the bottom, and the lake was to be refilled when the operation was completed—obviously a highly temporary change. And *Fontenelle* v. *Omaha Tribe of Nebraska*, 298 F. Supp. 855 (D. Neb.), affirmed, 430 F. 2d 143 (C.A. 8), does not pertain at all to temporary fluctuations.

III. THE BOUNDARY OF THE GREAT SALT LAKE HAS MOVED BY A PROCESS OF RELICTION, SINCE ITS MOVEMENTS HAVE BEEN GRADUAL AND IMPERCEPTIBLE

We thus return to the question presented by the established federal common law of reliction: Has the boundary of the Great Salt Lake, defined by the "average yearly stage," moved by a gradual and imperceptible process? The answer, on this record, is "Yes." As shown *supra*, pp. 12–13, the most extreme annual movement of the boundary at the flattest (and thus most extreme) point on the shore was only 15 inches per hour. That rate of movement is gradual and imperceptible. It is equivalent to the movement of the minute hand on a clock with a 2½

inch radius (about the size of a home alarm clock). The perceptible movement of the second hand on a standard government wall clock is 80 times more rapid than the most extreme lake movement. And the lake movement is more than 30 percent slower than the speed of the slowest known snail (Guiness Book of World Records, 1974 ed., p. 101).

As noted, 15 inches per hour is the most rapid movement of any part of the boundary of the Great Salt Lake that has occurred in historical times. A better standard for judging the Lake's fluctuation is the average movement over a period of years, measured around the whole perimeter of the Lake. That movement is about 1½ inches per hour, far below the threshold of human perception. Should one choose to follow the Special Master's suggestion (R. 15–16; Findings of Fact 14–15) and consider the movement in an average year along areas of flat shorelands, that movement would be substantially less than 15 inches per hour. Since the average lake level change of .69 feet (Ex. D–3) is about 35 percent of the most extreme change in lake level, the rate of movement in an average year at the flattest point along the shore would be about 5 to 6 inches per hour. The Special Master therefore erred in declaring (R. 20, 30) that such a movement cannot be found to be imperceptible.

Moreover, the law requires a specific finding that the movement was perceptible in order for reliction not to apply. A common law presumption favoring an ambulatory boundary is expressed in the rule that if an avulsion is not shown, an accretion will be pre-

sumed. Lundquist, *supra,* 14 Ariz. L. Rev. at 325 n. 54; 65 C.J.S. *Navigable Waters* § 86c; 5A Thompson, *supra,* § 2561 n. 88. Utah does not appear to contend that an avulsion has taken place in the change in boundary between statehood and the date of the quitclaim deed, and the Special Master specifically notes that none is involved (R. 10).

IV. ANALYSIS OF THE PARTIES' INTERESTS IN THE GREAT SALT LAKE UP TO THE TIME OF THE GREAT SALT LAKE LANDS ACT REQUIRES THE APPLICATION OF THE DOCTRINE OF RELICTION

The Special Master correctly construed *Bonelli, supra,* 414 U.S. at 322–323, 328–329, 331, as requiring an analysis of the "public benefit to be protected" (*id.* at 323) in fixing the boundary (R. 21, 26). That analysis, however, indicates that the application of the doctrine of reliction is completely consistent with the public benefit considered in *Bonelli.* Throughout that opinion, this Court indicated that the public benefit to be protected was the State's interest in safeguarding navigation or related activities. Thus, in *Bonelli,* the State was denied title to exposed lands because the channelization project was not "undertaken to give the State title to the subject lands for the protection of navigation or related public goals" (*Bonelli, supra,* at 323). And the Court noted that the State's claim must fail, because "depriving petitioner of the subject land is [not] necessary to any navigational or related purpose" (*id.* at 331).

Similarly, in the present case, the general applicability of the reliction doctrine was necessary for the preservation of Utah's interest in navigation on the

Lake, up to the date of the Act. Indeed, the Special Master, in Conclusion of Law 4 (R. 32), in fact applied the doctrine of reliction to the reinundation which occurred since June 15, 1967, as follows:

> The public benefit of Utah which is entitled to protection has accompanied the reinundation of the bed of the Lake to approximately its extent at statehood.

And this would undoubtedly be correct, were it not for the passage of the Great Salt Lake Lands Act. By accepting that Act, Utah agreed to waive its right to control the Lake for navigational and related purposes to the extent that the Lake might rise above the meanderline, in return for the benefits accruing from a fixed boundary line.

Thus, Representative David S. King, of Utah, at the February 1966 hearings on the Great Salt Lake Lands Act, stated (Ex. P–22, p. 112):

> In that event [the return of the Lake to statehood level] the State of Utah would lose and it is perfectly willing to assume that risk. In other words, in this situation certainty is more important to all parties than the matter of gambling over the gain or loss of new territory. What is most important is that we get the matter settled and the State of Utah would be perfectly willing to hazard the risk of its losing acreage if the water should exceed the meanderline * * *. [Hearings Before the Subcommittee on Public Lands of the Committee on Interior and Insular Affairs, on H.R. 1791 and H.R. 6267, Great Salt Lake Relicted Lands, 89th Cong., 2d Sess., at 112 (1966).]

Contrary to the Master's statement that Congress could have intended Utah to pay for relicted lands only if the 1967 lake level was reasonably stable (R. 26), it was specifically contemplated that the Lake would continue to fluctuate. The Act itself, in Sections 2 and 4, recognizes the possibility of Lake movements both above and below the meanderline. Senator Bennett of Utah specifically stated in floor debate that within 10 years the Lake would rise enough to inundate some 350,000 acres (112 Cong. Rec. 5008) and later stated that he certainly hoped that the area was entering a wet period which would cause the Lake to rise (112 Cong. Rec. 11047). And of course Rep. King's testimony cited above supports the same conclusion. All of Utah's federal legislators supported the final legislation embodying this understanding. See 112 Cong. Rec. 5005, 7505, 7508, 11078–11081.

What we have here, realistically, is a gamble (although a low-risk gamble, as explained *infra*) by Utah that did not pay off. Utah's position has always been that reliction does not apply to the Great Salt Lake and that the State therefore owns all land under water at statehood, which Utah equates with the surveyed meanderline. The State's representatives apparently believed, however, that with the Lake at its very low level of the mid-1960's, a stable boundary and certainty of land titles were more important than a possible victory in litigation on the reliction question. Thus, the Great Salt Lake Lands Act was adopted. If the Lake had fallen further, Utah would have become the free owner of land which otherwise might

have been lost under the doctrine of reliction. Since the Lake has instead risen, Utah may now be required to pay for land which it would have owned without payment, except for the Act. But the outcome of that gamble should not affect the legal determination as to the applicability of the doctrine of reliction up to the date of the quitclaim deed. And as shown above, both the general principles of the doctrine of reliction and Utah's interest in control of navigation required the doctrine to apply until it was made inapplicable by contract.

Moreover, under the Act the ultimate choice lies with Utah. Should our contention prevail in this Court, the State may choose to pay the United States for the lands conveyed in 1967 and thus obtain the fixed boundary thought to be important when the Act was passed, or it may choose instead to retain its rights under the doctrine of reliction. If the State simply refuses to pay the amount ultimately determined to be due to the United States, the conveyance by the United States will be voided and the doctrine of reliction will continue to apply. Great Salt Lake Lands Act, Sec. 5(b), 80 Stat. 193. In that event, Utah would be the owner, without payment, of the lands now beneath the waters of the Great Salt Lake, although it would continue to run the risk of loss in the event of a future fall in the lake.

CONCLUSION

It is therefore respectfully submitted that the United States should be confirmed as the owner, as of June 15, 1967, of such lands adjacent to United States

property as had been exposed by the recession of the ordinary high water mark of the Great Salt Lake between the date of statehood, January 4, 1896, and June 15, 1967.

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